CLAIMS

1. (Currently amended) A method of signal transmission in a communication system, comprising:

transmitting an optical beam through a modulator adapted to:

have a peak of light transmission at a first voltage;

substantially block light transmission at a second voltage greater than the first voltage; and

have another peak of light transmission at a third voltage greater than the second voltage; and

driving the modulator with an electrical signal having ~~two~~ three or more levels, wherein:

a first level is outside of a voltage range between the first and third voltages, said voltage range including the first and third voltages; ~~and~~

a second level is either inside the voltage range between the first and third voltages or outside of said voltage range on the opposite side from the first level; and

a third level is inside said voltage range.

2. (Original) The method of claim 1, wherein the second level corresponds to the second voltage.

3. (Original) The method of claim 1, wherein light transmission corresponding to the first level is lower than a peak light transmission.

4. (Original) The method of claim 1, further comprising generating the electrical signal based on a data stream, wherein each signal level corresponds to a different data value.

5. (Currently amended) The method of claim 1, wherein:

the second level is inside the voltage range between the first and third voltages and is different from any one of the first, second, and third voltages; ~~and~~

~~the two or more levels comprise a third level outside of the voltage range between the first and third voltages~~.

6. (Currently amended) The method of claim 1 [[5]], wherein the electrical signal is generated based on a duobinary data sequence and each of the first, second, and third levels corresponds to a different duobinary data value.

7. (Currently amended) The method of claim 1 [[5]], wherein:

the first level is less than the first voltage; and

the ~~third~~ second level is greater than the third voltage.

8. (Currently amended) The method of claim 7, wherein the voltage difference between the first voltage and the first level is different from the voltage difference between the third voltage and the ~~third~~ second level.

9. (Currently amended) The method of claim 1 [[5]], wherein a relative optical phase shift for the transmitted optical beam corresponding to the first and ~~third~~ second levels is different than about 180 degrees.

10. (Original) The method of claim 1, wherein the first level is selected based on desired receiver sensitivity at a selected bit error rate.

11. (Original) The method of claim 1, wherein the first level is selected based on an eye diagram at a receiver of the communication system.

12. (Original) The method of claim 1, wherein the modulator is a Mach-Zehnder modulator and the communication system is a wavelength division multiplexing (WDM) communication system.

13. (Original) The method of claim 1, wherein the difference between the first level and the first voltage exceeds 10% of the difference between the first and third voltages

14. (Currently amended) A transmitter for a communication system, comprising:

a modulator configured to transmit light generated by a light source, wherein the modulator is adapted to:

have a peak of light transmission at a first voltage;

substantially block light transmission at a second voltage greater than the first voltage; and

have another peak of light transmission at a third voltage greater than the second voltage; and

a driver configured to drive the modulator with an electrical signal having ~~two~~ three or more levels, wherein:

a first level is outside of a voltage range between the first and third voltages, said voltage range including the first and third voltages; ~~and~~

a second level is either inside the voltage range between the first and third voltages or outside of said voltage range on the opposite side from the first level; and

a third level is inside said voltage range.

15. (Original) The transmitter of claim 14, further comprising the light source.

16. (Original) The transmitter of claim 14, further comprising an encoder configured to convert an incoming data stream into an encoded data sequence, wherein the driver generates the electrical signal based on the encoded data sequence such that each signal level corresponds to a different data value of said sequence.

17. (Original) The transmitter of claim 16, wherein the encoded data sequence is a duobinary data sequence.

18. (Currently amended) A communication system comprising a transmitter, wherein the transmitter includes:

a modulator configured to transmit light generated by a light source, wherein the modulator is adapted to:

have a peak of light transmission at a first voltage;

substantially block light transmission at a second voltage greater than the first voltage; and

have another peak of light transmission at a third voltage greater than the second voltage; and

a driver configured to drive the modulator with an electrical signal having ~~two~~ three or more levels, wherein:

a first level is outside of a voltage range between the first and third voltages, said voltage range including the first and third voltages; ~~and~~

a second level is either inside the voltage range between the first and third voltages or outside of said voltage range on the opposite side from the first level; and

a third level is inside said voltage range.

19. (Currently amended) The communication system of claim 18, further comprising a receiver configured to receive optical signals from the transmitter via a communication link, said link including a link element ~~having~~ that is adapted to subject optical signals passing there through to bandpass filtering ~~characteristics~~.

20. (Original) The communication system of claim 19, wherein the link element is an optical router and the communication system has multiple instances of the transmitter.

21. (Canceled)

22. (Currently amended) Apparatus, comprising an optical transmitter coupled to an optical receiver via a communication link, wherein:

the optical transmitter comprises:

a modulator adapted to modulate an optical beam with data; and

a driver adapted to drive the modulator with an electrical signal corresponding to the data;

the communication link subjects the modulated beam to bandpass filtering; ~~and~~

the modulator is overdriven to introduce a phase shift between optical symbols in the modulated beam such that, at the receiver, inter-symbol interference caused by the bandpass filtering is reduced;

the modulator is adapted to:

have a peak of light transmission at a first voltage;

substantially block light transmission at a second voltage greater than the first voltage; and

have another peak of light transmission at a third voltage greater than the second voltage; and

the electrical signal has three or more levels, wherein:

a first level is outside of a voltage range between the first and third voltages, said voltage range including the first and third voltages;

a second level is either inside the voltage range between the first and third voltages or outside of said voltage range on the opposite side from the first level; and

a third level is inside said voltage range.

23. (Canceled)

24. (New) A method of signal transmission in a communication system, comprising:
transmitting an optical beam through a modulator adapted to:
have a peak of light transmission at a first voltage;
substantially block light transmission at a second voltage greater than the first voltage; and
have another peak of light transmission at a third voltage greater than the second voltage; and
driving the modulator with an electrical signal having two or more levels, wherein:
a first level is outside of a voltage range between the first and third voltages;
a second level is inside the voltage range between the first and third voltages;
the two or more levels comprise a third level outside of the voltage range between the first and third voltages;
the first level is less than the first voltage; and
the third level is greater than the third voltage.

25. (New) The method of claim 24, wherein the voltage difference between the first voltage and the first level is different from the voltage difference between the third voltage and the third level.